Emergency Planning and Preparedness

2005 Year in Review

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Environmental emergencies involving the release, or threatened release, of oil, hazardous materials or chemicals may potentially affect communities and the surrounding environment. Releases may be accidental, as in the case of a spill at a chemical plant, or may be deliberate, as in the case of 9/11. Releases may also be caused by natural disasters such as Hurricanes Katrina and Rita and recent floods in New England. The EPA-NE Emergency Planning & Community Right-To-Know Team works with a variety of private and public entities to plan, prevent and prepare for responding to spills, releases and other environmental emergencies. To that end, the Team assists industries in reporting chemical storage, activity, and releases; assists state and local governments in developing and implementing preparedness and emergency response plans; and provides individuals with “right-to-know” information about toxic chemicals in their communities.

EPCRA Programs

EPCRA

The Emergency Planning and Community Right-To-Know Act (EPCRA) established requirements for federal, state and local governments and industry regarding emergency planning and the reporting of hazardous and toxic chemicals. EPCRA gives the public and every community the right-to-know about chemicals that are being stored, transported or released into the environment. The key provisions of EPCRA are Tier II data collection and TRI reporting.

Tier II

Sections 311 and 312 requires facilities to submit information on chemical inventories to state and local officials for emergency planning purposes. These reports, known as Tier II, must be submitted annually. Tier II data is available to the public through their local emergency planning committees (LEPCs).

Toxic Release Inventory (TRI)

Section 313 requires facilities that manufacture, process or use significant amounts of toxic chemicals to report annually on toxic chemical releases and other waste management activities. EPA maintains this information in its Toxic Release Inventory (TRI) database which is available to the public over the internet. To help make completing the TRI reports easier for facilities, while at the same time improving the quality of the data, EPA-NE conducts extensive outreach and education for facilities on how to report via the internet. The Toxics Release Inventory–Made Easy (TRI-ME) software allows for direct data entry. TRI-ME checks the data for common errors and then prepares the forms — on paper, diskette or electronically over the internet — for submission to EPA.

Preventing Chemical Accidents & Releases

The Clean Air Act 112(r) program is designed to prevent chemical accidents and releases through a program of preparedness, response and prevention. The General Duty Clause of the program requires that owners and operators of facilities that produce, process and store extremely hazardous substances have a general duty to:

- identify hazards associated with an accidental release
- design and maintain a safe facility; and,
- minimize consequences of accidental releases that do occur.

The program also requires facilities to develop Risk Management Plans (RMP). An RMP includes an executive summary, chemical registration information, off-site release analysis, five-year accident history, a prevention program and an emergency response plan. Companies must also report any spills or other releases of hazards substances that exceeds certain thresholds. This reporting is required under Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Cameo & LandView

Computer-Aided Management of Emergency Operations (CAMEO) is a system of software applications used to plan for and respond to chemical emergencies. Front-line chemical emergency planners and responders use CAMEO to access, store and evaluate information critical for developing emergency response plans. LandView is software that provides federal environmental and census data on maps.

Exercises

EPA-New England's HAZMAT exercise program works with a myriad of federal, state and local emergency planners and responders. Expanding roles of numerous agencies has underscored the need for proactive coordination and planning. Exercises conducted in all six New England states have assisted local communities to further develop their emergency response capabilities and enhance community awareness. The design and implementation of these exercises allows planners and responders to identify areas for improvement, such as safety, hazards assessment, communication, responder accountability and resource management.

EPCRA 2005 Accomplishments

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The EPCRA Team held workshops in 34 communities throughout New England in partnership with its state environmental and emergency management agencies. The purpose of the workshops — "Basic EPCRA" and "TRI Compliance" — was to improve data quality, encourage electronic reporting and increase compliance. Over 2800 industry representatives, consultants, public sector and emergency response staff participated in these workshops.

As a result of these workshops, Tier II submissions increased and were submitted electronically. EPA-NE received self disclosures under the Audit and Small Business Policies from 74 facilities. These self disclosures saved industry over $5 million and represent "new" facilities reporting for the first time. (See "Self Disclosure" table below.) Likewise, under TRI, reporting of persistent bioaccumulative toxics (PBTs) continued to increase which represents a better understanding by industry of their TRI obligations. In addition to the self disclosures, several voluntary revisions were submitted under Tier II and TRI. Electronic submissions to TRI increased from 36.3% to 51.4% while paper submissions decreased 13.2% to 10.2%. In both programs the electronic submission of EPCRA data is of higher quality and more easily utilized by responders.

Compliance Assistance

Program	# & Type of Event	# of Attendees
TRI	14 workshops	440
EPCRA Tier II & RMP	20 workshops	2400
CAMEO	11 training sessions	380
CAMEO	3-day basic course	60
CAMEO	two 2-day advanced courses	50
CAMEO	3 specialty classes	75
Exercises	11	920
Conferences	4 major	800

Self Disclosures

Program	# of Facilities	Deferred Penalties
EPCRA – Tier II	41	$2,587,100
EPCRA - 313	30	$1,665,528
EPCRA – Tier II & 313	3	$783,740
Total	74	$5,036,368

TRI Reporting via the Internet

% of Facilities TRI Reporting NE 2004	National TRI Goal 2004	% of Facilities TRI Reporting Nationwide 2003	% of Facilities TRI Reporting NE 2003
51.74%	37%	33.7%	36.2%

EPCRA 2005 Accomplishments

Enforcement & Injunctive Relief

Program	Type of Action	Penalty
EPCRA – Tier II	24 inspections	TBD*
EPCRA - 313	10 inspections	TBD*
EPCRA	2 settlements	$39,097
RMP	6 inspections	TBD*
RMP	3 settlements	$79,953
RMP	5 proposed	$264,112
RMP	11 desk audits**	-----
RMP	17 field audits**	-----
RMP & EPCRA	5 companies - injunctive relief	$1.91 million

* To be determined.
** Results of audits: Numerous safety deficiencies were identified. Types of facility changes resulting from audits: Many facilities upgraded safety systems and improved hazardous identification as well as operation and maintenance programs.

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EPCRA & RMP 2005 Case Highlights

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Slater Dye Works, Inc.

The Company operates a dye works facility in Pawtucket, RI. A release occurred when the Company accidentally combined sodium hydroxide and hydrogen peroxide in a chemical holding tank. The incompatible chemicals reacted causing the chemicals to be released into the air and to the nearby Blackstone River, resulting in a fish kill. The release forced emergency responders to evacuate approximately 200 people from the vicinity. Slater failed to properly notify emergency authorities. EPA-NE's findings were released on October 5, 2004.

Northeast Refrigerated Terminals

Northeast Refrigerated Terminals had a release of approximately 1400 pounds of anhydrous ammonia from a pressure relief valve at its Middleboro, MA facility on April 18, 2004. The release resulted in evacuations within a one-mile radius of the facility. EPA and local and county emergency response teams responded to the incident. EPA determined that the cause of the accident was faulty maintenance procedures. The pressure relief valve experienced minor venting prior to April 18, which may have weakened the back pressure setting. The valve was not immediately replaced after the venting incident. In addition, the relief valve in question had not been replaced within the recommended five-year interval. EPA-NE's findings were released on December 20, 2004.

Callahan Company Inc.

Callahan Company, Inc. of Walpole, MA handles large quantities of extremely hazardous, flammable and reactive chemicals. The EPA-NE investigation was conducted following two acetone releases within three weeks. EPA determined that both releases occurred as a result of human error. The investigation found that: Callahan failed to follow standard operating procedures for the chemical loading operation; ignition sources were in areas where flammable vapors were present; there was no redundancy, mechanical interlocks, alarms or detectors at the plant; incompatible chemical and pumping operations were found; aisle height and width were deficient in the drum storage area; fire protection was inadequate; and there was a missing fire door on the drum filling station. In addition, emergency response procedures were deficient and Callahan failed to properly report the first release to the National Response Center (NRC). EPA-NE's findings were released on March 28, 2005.

On Sept. 30, 2005, EPA-NE proposed a $113,640 penalty against Callahan under EPCRA, CERCLA and the CAA. Callahan has already paid a $101,000 penalty to MA DEP and is cleaning up the spilled acetone from the soil and wetlands adjacent to its facility.

Pfizer

On June 25, 2002, the Pfizer Global Research and Development facility in Groton, CT had a chemical incident with borane tetrahydrofuran in a 2 molar concentration (BTHF2M). EPA believes that the chemical release resulted from an accident in which the chemical reagent underwent a Boiling Liquid Vapor Explosion (BLEVE). The BLEVE most likely occurred because the 400L cylinder used to package the material was not refrigerated during transportation and storage and the cylinder was subjected to elevated temperatures for an extended period of time. These conditions most likely led to the chemical release. EPA-NE's findings were released on June 3, 2005.

Harodite Industries, Inc.

Harodite, located in Taunton, MA, operates a textile finishing mill and conducts operations such as bleaching and adhesive application on fabrics and components for the auto industry. An accident occurred on March 2, 2005 when a delivery of 2000 gallons of 50% sodium hydroxide from a tank trunk was accidentally put into a sodium silicate

storage tank. The sodium hydroxide overflowed through the tank outlet onto the ground outside the building and then to the nearby Three Mile River. The accident was not reported to EPA until five days later. EPA determined that the cause of the accident was the failure by the chemical supplier to follow proper delivery procedures and a failure to verify the destination of his load. Inadequate labeling of the delivery point, lack of operating procedures for receiving bulk chemical deliveries, and a lack of safety locks were contributing factors to the release. EPA-NE's findings were released on August 9, 2005.

Nova Chemicals

EPA-NE issued an administrative complaint and proposed a $39,663 penalty against Nova Chemicals, Inc. of Indian Orchard, MA. On January 7, 2004, the company had a chemical accident resulting in the release of 4,500 pounds of styrene monomer. The complaint alleges that the Company failed to take steps to prevent chemical releases, failed to minimize the consequences of accidental releases and failed to immediately report the accident and resulting spill. The complaint was issued on September 21, 2005.

OSRAM SYLVANIA

OSRAM SYLVANIA of Exeter, NH has agreed to pay $14,000 to settle a complaint brought by EPA-NE for violating federal clean air and chemical release notification rules in 2003. The company, which manufactures glass and ceramic products, had an accidental release of hydrofluoric acid on May 13, 2003. The complaint alleged that OSRAM SYLVANIA failed to have an adequate risk management plan and failed to report the release in a timely manner. The consent agreement was filed on June 29, 2005.

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EJ and Schools Accomplishments

Along with the accomplishments described above, the region has assigned resources to support EPCRA and RMP work in EJ communities. One area where we have invested resources is in our schools, because of the accumulation and mismanagement of dangerous chemicals. The team has removed large quantities of unnecessary chemicals from the schools, making these schools safer for students, teachers, administrative staff and first responders who would be called in during an emergency. In Revere High School alone, the team consolidated over 60 different stock chemicals, resulting in safe storage and one-stop shopping for teachers who need chemicals. They disposed of 1,250 lbs of chemicals no longer used by students, reducing the amount of chemicals on site by 31%. More importantly, the team set up a system to keep dangerous conditions from developing again in the future. The project integrated pollution prevention with compliance and best management practices in the public school setting. During the upcoming fiscal year, the team plans on expanding the project to three additional communities. Along with the EJ schools inventory project, the EPCRA team incorporates environmental justice factors into its enforcement targeting and compliance assistance programs.